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EXAMINER

LAROSE, COLIN M

ART UNIT

PAPER NUMBER

2623

DATE MAILED: 09/10/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/657,641

Applicant(s)

ENOMOTO, JUN

Examiner

Colin M. LaRose

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☒ Claim(s) 19 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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DETAILED ACTION

Minor Informalities

1. This application appears to be a literal translation into English from a foreign document and contains grammatical and idiomatic errors. Examiner requests Applicant to review the specification and the claims and to correct any such errors.

Claim Objections

2. The following sections of 37 CFR §1.75(a) and (d)(1) are the basis of the following objection:

(a) The specification must conclude with a claim particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention or discovery.

(d)(1) The claim or claims must conform to the invention as set forth in the remainder of the specification and the terms and phrases used in the claims must find clear support or antecedent basis in the description so that the meaning of the terms in the claims may be ascertainable by reference to the description.

3. Claim 19 is objected to under 37 CFR §1.75(a) and (d)(1) as failing to particularly point out and distinctly claim the subject matter that the applicant regards as the invention.

Regarding claim 19, it appears as though the “second image data” should be produced from the “first image data”, and not vice versa, as claimed. In claim 14, correction is performed on the second image “based on” the first image. This suggests that the second image is produced or otherwise based on the first image.

Correction or clarification is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,204,858 by Gupta and U.S. Patent 6,009,209 by Acker et al. ("Acker").

Regarding claims 1 and 7, Gupta discloses a method (figure 4) of setting a region to be adjusted to redeye correction in which a redeye in an image that has been produced in shooting is corrected into an eye having a pupil of a specified color, comprising the steps of:

automatically extracting only the redeye from a first region including the redeye which has preliminarily been designated by an operator or automatically (420 and figure 5: a user designates a first area ("first region") and then a candidate area (which contains only a redeye) is automatically extracted from the first area; column 3, lines 12-26); and

setting a second region to be subjected to redeye correction for correcting a color of the pupil into said specified color of the pupil (i.e. the candidate area, which contains a redeye, is set as a "second region" for pupil-color correction).

Further regarding claim 7, Gupta discloses converting the second region into the eye having the pupil of said specified color to correct the redeye (figure 9).

Gupta also discloses that once the candidate area is extracted, the system will prompt a user to verify that the candidate area does in fact correspond to a redeye (430). Presumably, Gupta's automatic extraction process always successfully sets a candidate area that contains a

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redeye. However, Gupta does not disclose a course of action when the user determines that the candidate area does not contain a redeye.

Thus, Gupta is silent to setting the second region by manual designation if the redeye cannot be automatically extracted.

Gupta's "candidate area" denotes only an area that exhibits that redeye effect. If Gupta's system is unable to automatically extract the candidate area to the satisfaction of the user, those skilled in the art would have known to use an alternative method for extracting only a redeye region.

Acker discloses a similar redeye correction system. In particular, Acker discloses an alternate method by which the redeye region is extracted from an image. The user zooms in on the redeye and then uses an on-screen cursor to draw a border around the redeye, thus setting the redeye region manually (column 6, lines 3-11).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Gupta by Acker to manually designate the second region if automatic extraction fails, since permitting a user to designate the redeye region manually allows the redeye region to be extracted even when the user determines the automatic extraction to be unsuccessful or inadequate.

Regarding claims 2 and 8, Gupta discloses that the first region is a rectangular frame surrounding an eye (column 3, lines 12-17).

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Regarding claims 3 and 9, Gupta discloses the image frame is designated as said first region using shooting information (i.e. the frame is designated using the image's pixels, or "shooting information").

Regarding claims 4 and 10, Gupta discloses at least one of each eye can be designated by designating one eye by means of enclosing the eye with an area in a rectangular shape (column 3, lines 12-17).

Regarding claims 5 and 11, Gupta discloses the setting step of said second region is performed on image data which has been subjected to color adjustment (column 3, lines 27-34).

Regarding claim 6 and 12, Gupta is silent to the claimed limitations.

Acker discloses a similar redeye correction system. In particular, Acker discloses that when a redeye region is set, a position of the redeye is roughly designated in a verification screen (i.e. the position of the redeye is shown on a display: figure 2A and column 6, lines 7-11; and the area of the redeye is roughly designated so that it may be zoomed in on) for determining an image processing condition including at least one of color and density (i.e. the "conditions" (e.g. the areas) of the redeye processing are determined by the displayed region of the redeye), a display screen is replaced with an output image and thereafter setting said second region is performed (i.e. the zoomed image on the screen replaces the original image, and the user sets the second region).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Gupta by Acker to roughly designate the position of the redeye on the screen and

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replace the screen with a an output image, as claimed, since displaying the image and region-setting results to a user facilitates the redeye designation process.

Regarding claim 13, Gupta discloses setting the second region and performing the redeye correction on an RGB color image (which has been shot as a color image). Gupta does not disclose converting the corrected color image into a monochrome image for output. However, at the time of the invention, converting an RBG image to a monochrome image was well-known and it would have been obvious to those skilled in the art to convert the color image into monochrome for the purposes of saving storage space, or for viewing the image in one color, or for printing in grayscale, etc.

6. Claims 14-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gupta and Acker, as applied to claim 7 above, and further in view of U.S. Patent 5,432,863 by Benati et al. ("Benati").

Regarding claim 14, Gupta is silent to the redeye designation by setting said second region being performed on first image data while said redeye correction being performed on second image data, as claimed.

Benati discloses a similar redeye detection/correction system. In particular, Benati teaches detecting the redeye region in a first image, and then correcting the redeye region in a second image, based on the location of the redeye in the first image. Figure 3 shows the detection phase 200 is performed on the input image 100. Figure 4 shows that the input image is converted into a lower (310) or higher (330) resolution image on which redeye correction (380) is performed.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Gupta by Benati to achieve the claimed invention since Benati teaches that “one might wish to perform the [redeye] detection phase in some image resolution, but perform the fix phase in another” (column 7, lines 30-32).

Regarding claims 15-17, Benati teaches the first image has fewer bits, is smaller, and has lower resolution than the second image (i.e. the second image has higher resolution (figure 4, 330), and therefore has more bits and is larger).

Regarding claim 18, Benati discloses that said first image data is image data of a partial image of an image represented by said second image data (i.e. the first image is a representation of the second image, therefore, the first image data is at least “a partial image of an image represented by said second image data”).

Regarding claim 19, Benati discloses that the second image data is produced from the first image data (i.e. the second image is a lower- or higher-resolution version of the first image).

Regarding claim 20, Benati teaches the first image data is a prescanned image (i.e. an image at some resolution) whereas said second image data is fine scanned image data (i.e. an image at a higher resolution).

Regarding claim 21, Benati discloses the redeye designation is performed on said first image data (200, figure 2) and the redeye correction is performed on said second image data (380, figure 4), said result of the redeye designation is reserved separately from said first image data and thereafter utilized for said second image data (Benati creates, from the input image, a binary bitmap that designates the location of only the defective pixels; the result of the

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designation is then utilized for the second image data to denote which pixels are to be corrected; column 4, lines 29-42).

Regarding claim 22, Benati discloses the redeye designation information is at least one of redeye position information and redeye region information (e.g. figure 9 shows bitmaps which designate the position of the redeye).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Colin M. LaRose whose telephone number is (703) 306-3489. The examiner can normally be reached Monday through Thursday from 8:00 to 5:30. The examiner can also be reached on alternate Fridays.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au, can be reached on (703) 308-6604. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the TC 2600 Customer Service Office whose telephone number is (703) 306-0377.

CML

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8 September 2003


Jon Chang
Primary Examiner